

6.—*South African Crustacea (Part XII of S. A. Crustacea, for the Marine Investigations in South Africa)*. — By the Rev. THOMAS R. R. STEBBING, M.A., F.R.S., F.L.S., F.Z.S., Fellow of King's College, London, Hon. Memb. of New Zealand Inst., Hon. Fellow of Worcester College, Oxford.

(Plates I—VII of vol. XIX. Plates CXVI—CXXII of Crustacea).

Of the eleven species with which the present contribution is concerned five are offered as new to science. About one of the species there is an element of mystery worthy to be solved by some one among the many skilled carcinologists of our day. That publication of this treatise has been considerably delayed is due to causes with which writers on systematic zoology are only too familiar. But with regard to the comparative meagreness of results as here exhibited, it may be explained that numerous specimens have been carefully examined, yielding results necessary for museum purposes, while supplying no addition, or none under present circumstances applicable, to scientific nomenclature.

BRACHYURA.

TRIBE OXYRRHYNCHA.

FAMILY INACHIDAE.

GENUS ACHAEOPSIS, Stimpson, 1857.

ACHAEOPSIS THOMSONI (Norman).

See these Annals, vol. XVII, p. 24, pl. 90.

A specimen was obtained at a depth of 166 fathoms at Vasco de Gama peak, S 75 E, 13 miles; Cape Peninsula. S.A.M. No. A 1414.

TRIBE CYCLOMETOPA.

FAMILY XANTHIDAE.

GENUS TETRALIA, Dana, 1851.

TETRALIA GLABERRIMUS (Herbst).

See these Annals, vol. VI, p. 305; 1910.

A specimen in close correspondence with Dana's figures was obtained by J. de Souza at Mozambique S.A.M. No. A 1415.

GENUS ACTAEA, de Haan; 1833.

ACTAEA PARVULUS (Krauss); 1843.

See these Annals, vol. VI, pp. 298, 299; 1910.

Specimens obtained by Mr. K. H. Barnard at Mozambique (Nov. 1912) are referable to this species. One specimen seemed near to *Pilodius martensii* (Krauss), but the ambulatory peraeopods are not biuncinate. S.A.M. No. A 2221.

GENUS HYPOCOLPUS, Rathbun.

1834. *Cancer* (part), Milne Edwards, Hist. Nat. Crust., vol. I, p. 376.
 1861. *Hypocoelus*, Heller, Sb. Ak. Wien, vol. XLIII, p. 319.
 1893. „ „ Henderson, Tr. Linn. Soc., Zool., vol. V, pt. 10,
 p. 358.
 1897. *Hypocolpus*, Rathbun, Pr. Biol. Soc. Washington, vol. XI, p. 164.
 1898. *Hypocoelus*, Alcock, J. Asiat. Soc. Bengal, vol. LXVII, pp. 71, 111.

Milne Edwards, while like Herbst and Audouin (in Savigny) leaving the species in *Cancer*, practically defines a new genus by the statement, "A great oval cavity on each pterygostomian region (disposition of which we know no other example in the Crustacea)". For the typical species he curiously misquotes Herbst (1790) and Audouin (1825) as authorities for *C. esculptus* and then gives the species as *C. sculptus* instead of the correct *exsculptus*. Heller's *Hypocoelus* being preoccupied was changed by Miss Rathbun into *Hypocolpus*.

HYPOCOLPUS EXSCULPTUS (Herbst).

1790. *Cancer exsculptus*, Herbst, Krabben und Krebse, vol. I, p. 265,
 pl. 21, fig. 121.
 1825. „ „ Audouin, Expl. pl. d'Égypte (Savigny), pl. 6,
 fig. 3.
 1834. „ „ *sculptus*, Milne Edwards, Hist. Nat. Crust., vol. I, p. 376.
 1861. *Hypocoelus sculptus*, Heller, SB. Ak. Wien, vol. XLIII, p. 322.

Savigny's plate contains 5 figures of this species, important, but obscurely numbered. Heller by mistake refers to Savigny's fig. 2 instead of fig. 3. The specimen brought by Mr. Barnard from Mozambique (Nov. 1912) has greatest breadth 29 mm., median length 21 mm., subpterygostomian hollows just as figured in Savigny's plate and male pleon also in agreement. The one remaining cheliped has dark fingers with lighter tips, both palm and fingers longitudinally tuberculate. S.A.M. No. A 1211.

TRIBE CATOMETOPA.

FAMILY OCYPODIDAE.

GENUS CLEISTOSTOMA, de Haan; 1835.

See these Annals, vol. VI, pt. 4, p. 328; 1910.

In 1888, J. Linn. Soc., vol. XXII. p. 137, Dr. J. G. de Man restricted de Haan's genus by the institution of a new genus *Dioxippe* for de Haan's *C. pusilla* and a new species *D. orientalis*. He has also instituted two other genera *Paraclistostoma* and *Tylodiplax*, which Alcock thinks unnecessary. (See J. Asiat. Soc. Bengal, vol. LXIX, p. 374; 1900).

CLEISTOSTOMA BLEPHARISKIOS, n. sp.

Plate CXVI.

The specific name from *βλεφαρίς*, eye-lash, and *σζιά*, shade, alludes to the striking mass of setae surrounding the eyestalk. This organ is of moderate length, curved, slender except at the base, and furnished with a very small cornea. Another important feature which appears to distinguish this from the allied species in the shape of the extensive fourth joint of the third maxilliped, largely excavate at the inner angle, while the three following joints are insignificant in size, the first folded against the fourth joint and each furnished with long setae. The first and second maxillipeds are in fair agreement with the figures in Savigny's Egyptian Crustacea, pl. 2, figs. 1*b*, 1*c*, for the species named *Macrophthalmus leachii* by Audouin and *Cleistotoma leachii* by Milne Edwards, except that the exopod of the second maxilliped is here relatively longer. Savigny's plate shows a very dilated vibratory lamina for the second maxilla, yet not so dilated as it is in our species. The palp of the mandible as figured on Savigny's plate must, I think, be much exaggerated in size compared with the trunk. At any rate in our species it folds against the trunk, the third joint closely adjoining the incisor edge.

The first and second antennae are very small. The figures are more magnified than the other details in order to show the characters of the two little flagella in the first pair, the few-jointed flagellum in the second pair and its setose peduncle. The first paraeopods or chelipeds like the other limbs are setose; the fingers are slender, meeting at the tips and at one point of the inner margins by help of the single tooth of the movable finger. In all the

remaining peraeopods the pointed finger is perfectly straight, shortest in the fifth pair. The third and fourth pairs are remarkably alike, with the fifth joint widening distally and the sixth with considerable proximal breadth distally narrowed. The outer sides of these setose joints show oblique stripes. In the pleon the first segment is the widest and shortest, the second less wide but slightly longer, the rest gradually narrowing to the rounded setose telson. The carapace is about 9.5 mm. in breadth by about 6 mm. in length.

Collected in Delagoa Bay by Mr. K. H. Barnard. (Oct. 1912). S.A.M. No. 2131.

BRACHYURA ANOMALA.

FAMILY HOMOLIDAE.

GENUS LATREILLOPSIS, Henderson; 1888.

See these Annals, vol. XVII, p. 255; 1920.

LATREILLOPSIS BISPINOSUS, Henderson.

1888. *Latreillopsis bispinosa*, Henderson, Rep. Voy. Challenger, vol. XXVII, pt. 69, p. 22, pl. 2, figs. 3, 3a—c.
 1913. „ „ Ihle, Siboga-Exp., Dromiacea, p. 77, with synonymy.

A female specimen with eggs has a carapace 10 mm. long. All the peraeopods are wanting except one each of the second and fifth pairs. Also the central spine of the rostrum is broken and the supra-ocular spines are absent, probably by accidental fracture. But attention may be called to the slender long joint of the eye-stalk and that of the first antenna, both of which though quite stiff have the appearance of being composed of many little short joints. The thick following joint of the eye-stalk carries three short setae.

Locality, Cape Natal W. $\frac{3}{4}$ N. 13 miles; depth 35 fathoms. S.A.M. No. A 1353.

It may here be remarked that *L. alcocki*, described in these Annals in 1920 is evidently nearly related to *L. multispinosus*, Ihle, 1912, 1913, though less richly endowed in regard to its spines.

MACRURA ANOMALA.

TRIBE PAGURIDEA.

FAMILY PAGURIDEA.

GENUS CALCINUS, Dana.

1852. *Calcinus*, Dana, U. S. Expl. Exp., vol. XIII, pp. 435, 456.
 1914. „ Stebbing, Tr. R. Soc. Edin., vol. 1, pp. 255, 278
 (with part synonymy).
 1913. „ Balss, Abhandl. K. Bayer. Ak. Wien Suppl., vol.
 IX, p. 41.

Among the specimens of Malacostraca entrusted to me by Dr. W. S. Bruce leader of the "Scotia" expedition (the Scottish National Antarctic Expedition) were two which I referred to *Calcinus talismani*, A. Milne-Edwards and Bouvier. Supposing that identification to have been correct, the species now to be described may with some confidence be referred to the same genus. For both species show the unusual feature to which in 1914 I directed attention, namely, that in the second and third maxillipeds the trunk of the exopod greatly exceeds in breadth the endopod. In the figures and descriptions of the species of this genus to which I have had access I have not found any record of this character. It may be noticed in passing that Milne Edwards in his illustration of the second maxilliped of *Birgus latro* shows a very broad exopod. It is a perplexing circumstance that the specimens now to be dealt with have the right cheliped larger than the left.

CALCINUS ASTATHES, n. sp.

Plate CXVII.

The group of specimens to which I have given a name from the Greek word ἀσταθής, unsteady, agree however, as above noted, in having the right cheliped larger than the left, which is contrary to the accepted definition of the genus. The specimen from which the figures are drawn is in another respect abnormal, in that the larger uropod is on the right. But in another specimen of approximately equal size this abnormality does not occur, nor in the three smaller specimens. In one of these latter the inferior length of the right eye-stalk is much accentuated. In the specimen figured this character is very slightly indicated. In the present species the telson is

longer than broad with a smoothly rounded end, not as in *C. tali-*
mani broader than long and apically notched. The chelipeds are
similar in structure and armature of tubercles and setae on the last
three joints, the movable finger rather longer than the palm, a little
more so in the smaller cheliped; both have black spooned apices.
The fingers of the ambulatory limbs, with black ungues, are longer
than the preceding joint. The stout little fourth pereopod is sub-
chelate; the slender fifth is minutely chelate, with long curved setae
over the chela and the several joints carrying various groups of
setae set at different angles.

The carapace of the specimen figured had a length of 17 mm.,
with greatest breadth 9 mm., the left eye being 6.5 mm. in length,
the long terminal joint of the peduncle of the first antenna 3.5 mm.,
finger of smaller cheliped 5 mm., of the larger 5.5 mm.

Locality Delagoa Bay. Procured by Mr. K. H. Barnard, Oct. 1912.
S.A.M. No. A 2121.

Genus CANCELLUS, Milne Edwards.

1836. *Cancellus*, Milne Edwards, Ann. Sci. Nat., zoöl. vol. VI, pp.
262, 286.
1837. „ Hist. Nat. Crust., vol. 11, p. 242 (Cancelle, p. 212).
1895. „ „ „ „ Faxon, Mem. Mus. Comp. Zoöl.
vol. XVIII, p. 52.
1900. „ „ „ „ A. M.-Edw. & Bouvier, Exp. Tra-
vailleur & Talisman, p. 183.
1905. „ „ „ „ Alcock, Catal. Indian Decap. Crust.,
Fasc. 1, pp. 24, 76.

It is true that a leading character in the original definition of
this genus is the perfect symmetry of the pleon. But Faxon in
describing his *Cancellus tanneri* writes, "The abdomen as a whole is
not quite bilaterally symmetrical the right side being more swollen
than the left, a condition which gives the abdomen a slight twist
to the left." Alcock also, while describing the uropods as quite
symmetrical, adds "as also or nearly so is the telson."

CANCELLUS MAKROTHRIX, n. sp.

Plate CXVIII.

The specific name, from the Greek μακροθήριξ, long-haired, refers
to the remarkably setose character displayed in almost all parts,
including the carapace, pleopods and telson, and reaching an extreme

in the cheliform fourth peraeopods, while even the eye-stalks are hairy. The broad hand and short finger of the equal first peraeopods carry many rows of stiff setae. The spooned apices of thumb and finger are black. The fourth to the sixth joints of the ambulatory limbs are broad, the much narrower seventh joint is very slightly longer than the sixth, with an upturned black apex. The slender finger of the fourth peraeopods does not reach beyond the broad dark rasp of the preceding joint. The whole of the cheliform fifth peraeopod is slender. The telson, broader than long, with slightly excavate hind margin is a little unsymmetrical. It has a feature difficult clearly to represent, a deep hollow across the middle which resisted flattening out. The median length of the carapace is 21 mm. its breadth to the rear 22 mm.

The mouth-organs offer some points of interest, though, as these parts in the Paguridae are rather seldom figured, their use for comparison is diminished. In the second maxilla it will be noticed that the apex of the vibratory plate is unusually narrow. In the first maxilliped opportunity has been afforded for showing that the terminal part of the exopod is not as in the other maxillipeds subdivided into numerous jointlets. In the second maxillipeds the principal joint of the exopod is very long and broader than the joints of the endopod. In the third maxilliped it is less important as compared with the endopod, but the endopod itself has a feature probably of specific importance, namely, in the straight row of fourteen little tubercles near the inner margin of its third joint. The specimen is a female, with the sexual openings conspicuous at the bases of the third peraeopods.

Locality, Algoa Bay, depth 10 fathoms S.A.M. No. A 1541.

GENUS EUPAGURUS, Brandt, 1851.

See these Annals, vol. XVII, p. 259; 1920.

EUPAGURUS PLACENS, n. sp.

Plate CXIX.

Among the numerous species assigned to this genus I have failed to recognise one which combines the characters displayed by the specimen here to be described. It makes some approach to *E. spinulentus*, Henderson, which I have noticed on p. 260 of the reference given above for the genus, but a comparison of the details prevents any union between the two forms.

The carapace is 16 mm. long, the fifth pleon segment 2.5 mm., the sixth 2 mm. and the round-ended telson 3 mm., the eyes 6.5 mm. in length. The likeness to the *Pylochelidae* is dissipated by the obvious twist of the pleon and the asymmetry of the uropods, that on the left being much the larger. In both uropods the exceptional smallness of the inner branch should be noticed.

The front of the carapace is obscurely produced between the ophthalmic scales, below each of which is produced backward a faint ridge of the carapace, its front margin forming a small denticle on the outer side of each scale. These scales are wide apart, bilobed, not denticulate, but the larger inner lobe produced into an acute apex. The eye-stalks widen to the black corneae, which outreach the acicles. Of these the longer inner setulose branch is not calcified, the outer branch is denticulate. As in the first antennae so in the second the terminal joint of the peduncle is the longest, and in the second the flagellum is devoid of setae and more than four times as long as the peduncle.

The small mandibles have a sharp molar ridge on the inner side, the third joint of the palp the longest and very setose. The first maxillipeds are small and very delicate. In the second pair the sixth joint of the endopod is notably broader than the fifth or seventh and very setose, the exopod elongate. In the third pair the stem of the exopod narrows a little abruptly distally, this narrowing accentuated by the prominence of a group of setae, the stem not reaching the apex of the fifth joint of the endopod. The latter is elongate, its last four joints subequal in length, attached end on, fringed with setae.

The right cheliped is considerably the larger, its hand armed with two conspicuous rows of denticles on the palm, one continued irregularly along the broad-ended finger, the other on the inner side of the thumb. Between thumb and finger a gap is concealed by long setae; the outer margin of the thumb is dentate following an inconspicuous row of denticles on margin of the palm. The wrist is strongly dentate on the inner margin. The smaller left cheliped has a hand not unlike its companion, but with the fingers longer in comparison with the palm. The second and third peraeopods have fingers longer than the preceding joint, curved, fringed with setae. The fourth peraeopod has a short, curved finger, with sharp apex. The fifth has a diminutive finger, with setules on the blunt end.

Locality Mossel Bay, depth 19 fathoms. S.A.M. No. A 1537.

EUPAGURUS DEPROFUNDIS, n. sp.

Plate CXX.

The present species agrees with *E. placens* in the numerous rows of teeth or sharpened tubercles with which the hands and wrists of the large chelipeds are furnished. But in many details the two species differ not a little. Here the telson has a curiously produced lobe with calcified rim at the right extremity, and the right uropod instead of the left is the larger. The long flagellum of the second antenna here has the fringing setae which are wanting in the other species. In the delicate structure of the first maxillipeds the figures show slight but decided differences and in the third maxillipeds the sixth joint of the endopod is notably longer than either the fifth or seventh instead of being subequal to each. Note also apical tooth of its fourth joint. The fourth peraeopods are alike in the two species, but the fifth differ in that the little unfingerlike finger is here facing a produced blunt apex of the preceding joint making an apology for a chela.

In regard to the second and third peraeopods it may be noticed that the fourth joint of the third is shorter than that of the second pair, but as to the third joint the comparative length is reversed. The carapace of the specimen, a female, measures 14 mm. in median length, with a breadth to the rear of 10 mm. The eyes are 5 mm. long.

Locality Cape Morgan N. $\frac{3}{4}$ W. 13 miles; depth 250—320 fathoms. S.A.M. No. A 1540.

Henderson's *E. rubricatus* is reported from 700 fathoms.

MACRURA GENUINA.

TRIBE CARIDEA.

FAMILY ?

GENUS PROBLEMACARIS, Stebb.

1921. Stebbing. Ann. Mag. Nat. Hist. (9) VIII. p. 626.

Mandibles without palp; cutting edge, spine-row, and representative of molar in a continuous line. First and second maxillae with all normal parts well developed. Long flagellate exopods on all three maxillipeds and the peraeopods. End-joint of second maxillipeds not strip-like in attachment. Third maxillipeds slenderly pediform. First and second peraeopods similar, each forming a small chela, the wrist

undivided. The three following limbs simple. All parts except eyes, peraeopods and pleopods, strongly spined.

Generic name from *πρόβλημα*, a problem, and *ζάφτις*, a shrimp, in allusion to the difficulty of allotting the described form to any of the very numerous divisions of the *Caridea*.

PROBLEMACARIS SPINETUM, Stebb.

1921. Stebbing. l. c. p. 626.

Plates CXXI & CXXII.

Two specimens were obtained by Dr. Gilchrist in the year 1900 when dredging with shrimp trawl from the "Pieter Faure" at a depth "about 300 fathoms" "Table Mountain E. by S. 40 miles". S.A.M. No. A 109.

The specific name is the Latin word signifying "a thicket of thorns". The size, number, and arrangement of the spines in this species, though they may not exclude the possibility of its not being fully adult, at least mark it off as distinct from all other forms that I can find hitherto described. A superficial resemblance to the *Thalassocaris stimpsoni* figured by Bate in his "Challenger" Report, pl. 117, may partially account for its undeserved neglect. In number of spines it may have a competitor in *Ceratomyxis spinosus*, Faxon, but there the arrangement of them is quite different. The telson is reminiscent of that figured by Faxon for his *Calastacus stilirostris*, in which however the uropods are very distinctive.

The pointed rostrum with no ventral teeth is surmounted by a succession of four large spines, succeeded by two much larger on the median line of the carapace with a little tooth close behind the second. The antero-lateral angle of the carapace is produced into a spine much outstripping the eye and followed by a curved margin fringed with short equal spinules. The margin is then continued in a straight line to a small distal tooth, with the hind margin at right angles to the laterals, strongly excavate in the middle but convex for a space adjoining the distal tooth above-mentioned.

On the pleon the spines are present in rather baffling numbers. As shown in the plates the lower part of one segment carried 18 large spines, the full complement in another is 25; the sides and broad apex of the long quadrangular telson muster 18 which are plumose; to these must be added 2 small lateral spines or setae, and on the lower half some dorsal spicules are discernible. The first five segments of the pleon are rather short, the sixth nearly as long as the telson. The uropods are longer than the telson, with

dense fringes of long plumose setae except on most of the outer margin of the exopod. Low down this has a small tooth such as often marks the "diaeresis" or oblique dividing line, which however could not here be perceived. A faint longitudinal dorsal ridge carries minute spines.

The eyes have the cornea broader than the eye-stalk, colour dark. In the first antennae the first joint is very long, carrying an elongate spine near the base; this has an upturned point; of the flagella one is slender, obscurely six-jointed, the other stout, about as long as first joint of the peduncle. Second antennae carrying many long spines, the scale with two conspicuous but smaller divergent spines near the rounded setose apex. Mandibles with four- (or five-) toothed cutting edge, followed by a long row of setules and spinules to a slightly projecting dark mass of denticles, the trunk gradually narrowing from this broad front. First maxillae with outer plate narrow, apically carrying four spines. Second maxillae with narrow apical portion of endopod many-spined. First maxillipeds having two basal joints broad, the rest short and narrow. Second maxillipeds having on one side the sixth and seventh joints distinct but on the other in one piece, probably a malformation. Third maxillipeds with last four joints very narrow, seventh very short, sixth very long, twice as long as the fifth, fourth curved, two-thirds the length of the sixth, third as broad as long. Finger of first peraeopods with two spines on narrowly truncate apex. In second pair finger and thumb each tipped with a spinule, wrist here longer than hand instead of rather shorter as in preceding pair. The three following peraeopods have a short curved finger, hand much longer than wrist. Fifth peraeopod more slender than third or fourth. First pleopod with endopod not half as long as exopod and carrying a small coupling process with hooks at the apex. Length of specimen measured round the dorsal curve about 15 mm.

INDEX.

	PAGE		PAGE
Achaeopsis	235	Latreilopsis.	238
Actaea	236	latro (Birgus)	239
alcocki (Latreilopsis)	238	leachii (Cleistotoma)	237
Anomala (Brachyura)	238	makrothrix (Cancellus) pl. 118	240
Anomala (Macrura)	239	Macrura	243
astathes (Calcinus) pl. 117	239	martensii (Pilodius)	236
Birgus.	239	multispinosus (Latreilopsis)	238
bispinosus (Latreilopsis)	238	Ocypodidae	237
blephariskios (Cleistostoma) pl. 116	237	Oxyrrhyncha	235
Brachyura	235	Paguridae	239
Calastacus	244	Paguridea	239
Calcinus	239	parvulus (Actaea).	236
Cancellus.	240	Pilodius	236
Cancer.	236	placens (Eupagurus) pl. 119	241
Caridea	243	Problemacaris	243
Catometopa	237	Pylochelidae.	242
Ceratommysis	244	rubricatus (Eupagurus).	243
Cleistostoma.	237	sculptus (Hypocoelus)	236
Cyclometopa.	235	spinetum (Problemacaris) pl. 121,122	244
deprofundis (Eupagurus) pl. 120	243	spinosus (Ceratommysis)	244
Dioxippe	237	spinulentus (Eupagurus)	241
Eupagurus	241	stilirostris (Calastacus)	244
exsculptus (Hypocolpus)	236	talismani (Calcinus)	239
glaberrimus (Tetralia)	235	tanneri (Cancellus)	240
Homolidae	238	Tetralia	235
Hypocoelus	236	Thalassocaris	244
Hypocolpus	236	thomsoni (Achaeopsis)	235
Inachidae.	235	Xanthidae	235

EXPLANATION OF PLATES.

Plate I. (Crustacea Plate CXVI).

Cleistostoma blephariskios, n. sp.

- n. s. Lines indicating natural size of the specimen.
car., Pl. Dorsal view of carapace, and of pleon flattened out, less magnified than the following parts.
a. s., a. i. First and second antennae, more magnified than the preceding or following details.
m., mx. 1, mx. 2, mxp. 2, mxp. 3. Mandible, first and second maxillae, second and third maxillipeds, to a uniform scale.
oc., prp. 1, prp. 3, prp. 5. Eye, first, third, and fifth peraeopods, to a uniform scale, less than that of the mouth-organs.

Plate II. (Crustacea Plate CXVII).

Calcinus astathes, n. sp.

- car. Front of carapace, with eyes in position.
T., urp. Telson, and sixth segment of pleon carrying the uropods. The following parts more highly magnified.
a. s., m., mx. 1, mx. 2. First antenna, mandible, first and second maxillae (incomplete).
mxp. 1, 2, 3. First, second, and third maxillipeds.
prp. 1, 4, 5. First peraeopod (left cheliped), fourth and fifth peraeopods, much less magnified than the preceding details.

Plate III. (Crustacea Plate CXVIII).

Cancellus makrothrix, n. sp.

- car. Front of carapace, with the eyes attached.
T. Dorsal view of telson, and left uropod attached to the preceding segment.
a. s. First antenna.
m., mx. 1, mx. 2, mxp. 1, 2, 3. Mandible, first and second maxillae, first maxilliped (with further enlargement of the flagellum), second and third maxillipeds.
prps. 1, 3, 4, 5. First peraeopod (left), third, fourth, and fifth, all less magnified than the preceding details, except the separate chela of the fifth peraeopod.

Plate IV. (Crustacea Plate CXIX).

Eupagurus placens, n. sp.

- car. Front of carapace, with eyes, first antennae, and acicles of second, magnified to the same scale with the other figures, except those next following.

- ac., m., mxp. 1., gill of mxp. 3. Acicle, mandible, part of first maxilliped, gill of third, more magnified than the rest on account of their small size.
- T. Telson with fifth and sixth segments of the pleon and the right uropod.
- a. s., mxp. 2, mxp. 3. First antenna, second and third maxillipeds.
- prp. 1, prp. 1. On the right: finger, hand, and wrist of the right cheliped; on the left: finger, hand, and part of wrist of the left cheliped.
- prp. 4, prp. 5. Fourth and fifth peraeopods.
- urp. Left uropod.

Plate V. (Crustacea Plate CXX).

Eupagurus deprofundis, n. sp.

- car. Front of carapace, with eyes and the first and second antennae of the right side in position.
- T. Telson and two preceding segments of the pleon, with indication of the right uropod.
- m., mx. 1, mx. 2, mxp. 1, mxp. 2. Mandible, first and second maxillae, first and second maxillipeds.
- mxp. 3. Third maxilliped, less highly magnified than the preceding parts.
- prp. 1. First peraeopod (right cheliped) on a lower scale of magnification than the third maxilliped.
- prp. 4, prp. 5. Fourth and fifth peraeopods on the same scale as the maxillae.

Plate VI. (Crustacea Plate CXXI).

Problemacaris spinetum, Stebb.

- n. s. Line roughly indicating length of contour of the specimen.
- car. 1, car. d. Carapace in lateral view and (incomplete) in dorsal view.
- r. Lateral view of the rostrum.
- T., urp. Dorsal aspect of telson in connexion with sixth pleon-segment and left uropod.
- m., mx. 1, mx. 2, mxp. 1, 2, 3. Mandible, first and second maxillae first, second, and third maxillipeds to uniform scale, distal portion of mandible and second maxilla in further magnification.

Plate VII. (Crustacea Plate CXXII).

Problemacaris spinetum, Stebb.

- Pl. s., Pl. s. Two segments of the pleon detached, to show the armature, the upper figure showing only the ventral half of the segment.
- a. s., a. i. The first and second antennae, with further magnification of the apex of the scale as seen when flattened out.
- mxp. 2. Endopod of second maxilliped, apically differing from its companion figured on the preceding plate.
- prp. 1, prp. 1, prp. 2, prp. 3. First peraeopod (with further enlargement of its chela), second and third peraeopods.
- plps. First pleopod with short endopod, and one of the other pleopods, with small retinaculum.
-